

Listing of Claims:

1. (Currently Amended) A group communication system, comprising:

one or more control stations;

one or more base stations connected to the control station via a wire line or a wireless line; and

a plurality of mobile stations connected to the base stations via wireless lines,

wherein (a) the control station or the base station comprises means for controlling a group communication number which is under communication via any of said base and control stations, the group communication number being an identification number for a group communication made up of a group of mobile stations from among said plurality of mobile stations, and

(b) the mobile station comprises means for transmitting a group communication number together with a mobile station identification number upon executing location registration of the mobile station, and

wherein ~~as for the control station or the base station that receives~~ in response to receiving a group communication number transmitted together with a location registration signal from the mobile station, said control station or said base station comprises means for examining the presence or absence of a call ~~during communication~~ based on the group communication number and a group number controlling register that identifies which group communication calls are active, ~~with the information thereof being notified to the mobile station being notified~~ when a relevant group communication call is present so that the mobile station receiving the notification is allowed to participate in the group communication through a calling procedure based on the group number, automatically or through operation by a user of the mobile station.

2. (Original) The group communication system as defined in claim 1, wherein said control station comprises said means for controlling the group communication number which is under communication.

3. (Original) The group communication system as defined in claim 1, wherein said base station comprises said means for controlling the group communication number which is under communication.

4. (Currently Amended) The group communication system as defined in claim 1, wherein said control station or said base station comprises a location registration register module, a control module, and a switch module, with said location registration register module comprising a mobile station identification number register module and ~~a-said~~ group communication-number controlling register module.

5. (Original) The group communication system as defined in claim 4, wherein said control module is operatively connected with a control module at each of said base stations.

6. (Original) The group communication system as defined in claim 5, wherein said mobile station comprises a signal processing module connected to a register module which stores communication control information including the mobile station identification number and the group communication number, said signal processing module being programmed to transmit the stored mobile station identification number and the stored group communication number to the base station, automatically through a programmed procedure or through manual operation on the mobile station.

7. (Original) The group communication system as defined in claim 6, wherein said control module comprises a programmed step which confirms the mobile station through its identification number and a current location registration signal upon power ON of the mobile station followed by examining if there is a call for the group communication number, and if confirmed, notifies the group communication information to the mobile station.

8. (Original) The group communication system as defined in claim 7, wherein said control module further checks if hand-over into a new service area occurred for the mobile

station, and if YES, said programmed step is repeated under a new location registration signal indicative of the new service area.

9. (Currently Amended) A control station in a group communication system, comprising:

means for ~~providing-receiving a location registration signal including a group communication number for~~from a mobile station among a plurality of mobile stations to an information element of a location registration signal transmitted to a base station, when power of ~~a~~the mobile station is turned on or when ~~a~~the mobile station in communication over a plurality of zones ~~entered~~enters a group-communication objective wireless zone due to hand-over, the group communication number being an identification number for a group communication made up of a group of mobile stations from among said plurality of mobile stations or else; and,

means for ~~retrieving the group communication number by a group communication group number controlling register in a control station~~, examining presence or absence of a group communication call of the mobile station based on the group communication number received from the mobile station and a group number controlling register that identifies which group communication calls are active; and

means for ~~upon a relevant call notifying the information to the mobile station with information indicating the presence of the group communication call based on the examination and information enabling the mobile station so as to participate in the group communication in the course thereof.~~

10. (New) A method for supporting communication in a group communication system comprising one or more control stations, one or more base stations connected to the control station via a wire line or a wireless line, and a plurality of mobile stations connected to the base stations via wireless lines, the method comprising:

receiving a location registration signal including a group communication number from a mobile station, the group communication number being an identification number for a

group communication made up of a group of mobile stations from among said plurality of mobile stations;

determining whether a group communication call corresponding to the received group communication number is active based on a group number controlling register that identifies which group communication calls are active; and

notifying the mobile station that the group communication call corresponding to the received group communication number is active based upon the determination.

11. (New) A method according to claim 10, further comprising maintaining the group number controlling register that identifies which group communication calls are active at a control station.

12. (New) A method according to claim 10, wherein the notification received by the mobile station includes information enabling the mobile station to participate in the group communication through a calling procedure based on the group number either automatically or through operation by a user of the mobile station.

13. (New) A method according to claim 10, wherein the location registration signal with the group communication number are received from the mobile station after the mobile station is powered on.

14. (New) A method according to claim 10, wherein the location registration signal with the group communication number are received from the mobile station after the mobile station has entered a group-communication objective wireless zone due to hand-over.

15. (New) A method according to claim 10, wherein the group communication number is arbitrarily selectable by the mobile station.

16. (New) A method according to claim 10, wherein the location registration signal further includes an identification number for the mobile station, the method further comprising confirming whether the mobile station has been registered based on the

identification number received from the mobile station and a mobile station controlling register that includes identification numbers of registered mobile stations.

17. (New) A method according to claim 16, further comprising notifying the mobile station of a result of the confirmation.

18. (New) A method according to claim 16, further comprising enabling communication between the mobile station that sent the location registration signal and a different mobile station that is not a member of the group communication of the mobile station that sent the location registration signal.

19. (New) A control station in a group communication system, comprising:

a group number controlling register configured to store information identifying active group communications; and

a control module configured to receive a location registration signal including a group communication number from a mobile station among a plurality of mobile stations, the group communication number being an identification number for a group communication made up of a group of mobile stations from among a plurality of mobile stations, to examine presence or absence of a group communication call of the mobile station based on the group communication number received from the mobile station and the information stored in the group number controlling register, and to notify the mobile station with information indicating the presence of the group communication call based on the examination and information enabling the mobile station to participate in the group communication.

20. (New) A control station according to claim 19, wherein the information enabling the mobile station to participate in the group communication includes information for a calling procedure to participate in the group communication based on the group number, either automatically or through operation by a user of the mobile station.

21. (New) A control station according to claim 19, wherein the location registration signal with the group communication number is received from the mobile station after the mobile station is powered on.

22. (New) A control station according to claim 19, wherein the location registration signal with the group communication number is received from the mobile station after the mobile station has entered a group-communication objective wireless zone due to hand-over.

23. (New) A control station according to claim 19, wherein the group communication number is arbitrarily selectable by the mobile station.

24. (New) A control station according to claim 19, further comprising a mobile station controlling register that includes identification numbers of registered mobile stations,

wherein the location registration signal further includes an identification number for the mobile station, the control module further configured to confirm whether the mobile station has been registered based on the identification number received from the mobile station and the identification numbers in the mobile station controlling register.

25. (New) A control station according to claim 24, wherein the control module is further configured to notify the mobile station of a result of the confirmation.

26. (New) A control station according to claim 24, further comprising a switch module enabling communication between the mobile station that sent the location registration signal and a different mobile station that is not a member of the group communication of the mobile station that sent the location registration signal.

27. (New) A control station according to claim 19, wherein the control module is operatively connected with a control module at each of a plurality of base stations.

28. (New) A control station according to claim 19, wherein the control station carries out central control over a plurality of base stations disposed in different service areas, respectively, to provide a connection between the mobile station belonging to a first group of mobile stations under a first group communication and a different mobile station belonging to a second group of mobile stations under a second group communication different from the first group communication.